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#### **Recommended Citation**

Sinclair, G., Jordan, D.G. Generation OnlyFans: Examining the Effects of "Raunch Culture" on Depression via Social Media Use and Social Comparisons. Sexuality & Culture (2022). https://doi.org/10.1007/s12119-022-10025-3

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*Note.* This manuscript has been accepted for publication at *Sexuality & Culture* but has not yet undergone any formal proofing or typesetting.

Generation OnlyFans: Examining the Effects of "Raunch Culture" on Depression via Social

Media Use and Social Comparisons

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#### Abstract

"Raunch culture" is a term describing the promotion of overtly sexual representations of women. This concept may provide people opportunities to engage in positive social comparisons, but also negative social comparisons. As such, this concept could also relate to the phenomenology of depression in women. In an attempt to further investigate the effects of raunch culture, this study examined relationships between raunch culture, depression, and social media use in undergraduate students. Participants (N = 199) from a moderately-sized university in the Midwest completed measures of raunch culture, depression, social comparison, and social media use via an online platform. Primary hypotheses centered around the impact of raunch culture on depressive symptoms, as well as other variables such as social comparison and social media behaviors and their involvement regarding the relationship between endorsement of raunch culture and depression. Findings suggest that students with greater depressive symptoms were more likely to be accepting of behaviors associated with raunch culture, and that this effect may be more prominent in women. Results also indicate that raunch culture may be associated with an unfolding pathway, wherein endorsement of these features is associated with more intense consumption of social media, which in turn can lead to higher rates of social comparison and ultimately affect depressive symptoms. Future research may benefit from examining raunch culture and social media involvement in the context of other important psychosocial variables.

Keywords: raunch culture, depression, social media, social comparison

#### Introduction

The term raunch culture and has been used to represent Western culture's normalization of the sexualization of women (Barton, 2017, 2021; Barton & Mabry, 2018, Levy, 2005). Specifically, raunch culture refers to a shift in Western culture that promotes overtly sexual representations of women, wherein women are objectified, objectify one another, and are encouraged to objectify themselves (Levy, 2005). This shift in sexual behavior has associated with the proliferation of objectification of women in media such as television shows, magazines, and movies throughout the mid- to late-1990s (Barton, 2017). However, the late 20th centurv is not the only era of the United States where women have been objectified, as exploitative representations of women in media have been documented for the past 100 years (Berberick, 2010). For example, popular pornographic magazines such as *Playboy* (first issued in 1953) and *Hustler* (first issued in 1974) have long been criticized for their objectification of women (Krassas et al., 2001; Pitzulo, 2008). Sociologic and feminist perspectives point to the presentation of female models in these magazines, such that the models pose in a manner that communicates submissiveness and sexual availability, which leads the women to be viewed as sexual objects (Krassas et al., 2001). There is also a long history of female nudity in film, with several early silent era films produced for "erotic" purposes (e.g., Le Coucher de la Mariée, see Abel, 2010). Although nudity may be seen as empowering within a feminist framework (e.g., by promoting body positivity), female on-screen nudity has become more commonplace and is often criticized for its banality and for leading to further objectification of women (Smith et al., 2019).

One significant change throughout the 21<sup>st</sup> century, however, has been role of the internet and social media in the rise of raunch culture. For example, as alluded to above, women have long contended with the "beauty myth," comparing faces and bodies unfavorably to the models and actresses seen in the media. However, throughout the 2000s, women have been expected to look "slutty" or "release their inner porn star" (Barton, 2017). Traditionally, there were certain activities or behaviors that only "strippers" or "pornstars" could do, but now their actions are omnipresent in pop culture and today's society (Sherman & Hackathorn, 2020). This hypersexualized culture has not always existed, but now it is almost impossible, for example, to find an adult woman's Halloween costume that is not a "sexy" nurse or a "sexy" housemaid or watch television without seeing a commercial with half-naked women (Barton, 2017).

Ariel Levy, in her seminal 2005 book, describes raunch culture in terms of three events she sees taking place within U.S. popular culture: 1) that an essentially pornographic view of female sexuality has moved from the margins of our society to the cultural mainstream; 2) that women are talking about this shift as if it is liberating; and 3) that women are participating in these new cultural norms even though raunch culture is mostly about performance, rather than about one's own sexual satisfaction or pleasure (Levy, 2005). Thus, raunch culture may be seen as the dominant culture for most women of this current era, which may make them believe sexualized self-objectification is empowering, generating the belief that their conformity to these new societal norms is a choice (Barton, 2017).

#### **Operationalization of Raunch Culture**

Thus far, literature incorporating the term raunch culture has centered around discussion of a hypersexualized climate that promotes self- and other-objectification of women (Barton & Mabry, 2018). This term is closely aligned with the dimension of "pornographication" (McNair, 2009), which involves the mainstreaming of attitudes and behaviors once associated with the sex industry. Empirical investigations of outcomes related to endorsement of raunch culture are scarce, as this concept has been viewed primarily through media scholarship. That is, scholars

often emphasize the media's marketing of explicit sexual images, and how these messages or advertisements may promote women wanting to be viewed as sex objects (Gill, 2007). Phenomenologically, indicators of raunch culture stem from standards set by the sex industry for what it considered "sexy" or appealing (Barton, 2017, McNair, 2009). For example, activities and products commonly marketed in mainstream culture that align with the concept of raunch culture include, but are not limited to: "twerking," wearing smoky eye makeup, having plump lips, receiving a Brazilian wax, wearing platform stiletto ("stripper") shoes, and wearing low-cut shirts (Barton & Mabry, 2018).

Importantly, engagement with or endorsement of raunch culture is thought to be associated with negative outcomes (Rizos, 2012). That is, the empowering effects of raunch culture are meretricious – young women integrate these behaviors and attitudes within their sexual narratives, fostering a sense of identity which ultimately devalues into self-objectification. To our knowledge, no existing literature has sought to refine the concept of raunch culture and systematically examine its outcomes or correlates. This lack of empirical associations suggests a need for further investigation of this concept, given, for example, that some authors consider raunch culture to be "ruining" our society (e.g., Barton, 2021). With more attention being drawn toward to the behavioral indicators of raunch culture, we turn to theoretical frameworks that may help to situate the current study and findings presented further below.

#### **Theoretical Frameworks Associated with Raunch Culture**

#### **Objectification theory**

Fredrickson's and Roberts' (1997) objectification theory framework provides a set of tenets for understanding how women's socialization and experiences of sexual objectification are translated directly into mental health issues; namely, eating disorders, depression, and sexual

dysfunction (Moradi & Huang, 2008). As such, objectification theory is one model in line with the concept of raunch culture. Objectification theory posits that life experiences and socialization to gender norms promote sexual objectification of women (Fredrickson & Roberts, 1997; Moradi & Huang, 2008). More specifically, this framework proposes that objectification experiences socialize girls and young women to treat themselves as "objects" to be evaluated based on their bodily appearance (Fredrickson & Roberts, 1997).

Objectification theory proposes a specific pathway wherein experiences of sexual objectification lead to a) self-objectification (e.g., body surveillance behaviors), which in turn are associated with b) body shame, anxiety, disrupted awareness of internal bodily states, leading to c) more virulent affective symptomology (e.g., depression and disordered eating). Thus, the concept of raunch culture aligns well with this theoretical perspective, and allows for empirical research to more directly test the main tenets of this theory. For example, indicators of raunch culture (e.g., wearing sexually-provoking clothing) are, by their operationalization, associated with objectification specifically (Barton & Mabry, 2018). Thus, evaluating whether endorsement of or engagement in raunch culture is associated with affective symptomology is in line with and may provide further support for objectification theory.

#### "Male Gaze"

The male gaze is a closely related concept to objectification theory (stemming from feminist, film, and psychoanalytic theories; see Mulvey, 1989) that surrounds the depiction of women in visual arts and literature from a masculine, cisgendered, and heterosexual perspective, promoting representation of women as sexual objects or for the pleasure of the male viewer (Chanter, 2008). Regarding objectification theory, the male gaze is one phenomenon that is thought to spearhead the pathway detailed above; for example, an objectifying gaze directed at

women from men (or even the prospect of the gaze) can be one form of a sexual objectification experience that leads to self-objectification, as theorized by the objectification framework. Empirical studies associated with the male gaze phenomenon have focused on both men's and women's perspectives, finding that both genders engage in objectifying behaviors toward women (e.g., Bernard et al., 2012, Gervais et al., 2012, Gervais et al., 2013). The gender similarities for the male (or, female) gaze phenomenon is an interesting line of research, suggesting that both sexes engage in objectification behaviors toward women. Thus, it is likely that raunch culture may not be specific only to women, and that men's endorsement of these behaviors may also play a role in further objectification of women.

#### Social Comparison Theory

Social comparison is a pervasive phenomenon and an almost inevitable element of social interaction (Suls & Wheeler, 2012). The media and internet provide young persons with numerous opportunities to engage in social comparison (Wang et al., 2020) and interestingly enough, people have been found to generally desire social comparison (Swallow & Kuiper, 1988). Mettee and Smith (1977) theorized that social comparison provides feedback to help people determine the veracity of their existing self-assessments, which relates one's own performance or behavior relative to another person. These authors also note that social comparison functions serve as affective (i.e., emotional) feedback, a concept relating to evaluating how positive or negative it is to possess a certain given attribute or quality (Mettee & Smith, 1977).

Raunch culture, then, also aligns with a social comparison framework. Similar to objectification theory, social comparison theory emphasizes affective outcomes associated with making comparisons to others persons. For example, one form of social comparison, known as

"upward" social comparison involves comparing oneself with persons the individual perceives as higher-performing than oneself (Swallow & Kuiper, 1988). When participating in upward social comparison, individuals risk highlighting personal flaws and inadequacies which ultimately can impact their self-esteem and lead to depression (Swallow & Kuiper, 1988). Prior findings have shown a positive association between upward social comparison and depression, such that on average, the more someone engaged in upward social comparison (i.e., comparing their life to someone else's better life) on social media, the more depressed they felt (Wang et al., 2020). Another study uncovered the link between negative social comparison on Facebook and depressive symptomatology, finding that the tendency to engage in negative social comparison on Facebook predicted increases in rumination which in turn was associated with increases in depressive symptoms (Feinstein et al., 2013). Utilizing a social comparison framework to study raunch culture can help parse more nuanced antecedents and consequences of this concept. For example, other- and self-objectification can stem from attempts to compare oneself with others who are engaging in raunch culture as means to "fit in."

Social Media Consumption and Screen Time. Other relevant factors associated with social comparison theory and the raunch culture concept include use of social media and time spent using electronic devices. The current generation is growing up with technology as a central part of their everyday lives. For example, on average, adults spent up to 12 hours and 21 minutes on a media device (e.g., television, phone, laptop, gaming device, etc.) per day in 2020 (Nielsen Company, 2020), almost an hour increase from 2019. One study found that adults who spent more than six hours a day in front of a screen were more likely to experience moderate to severe depression (Madhav et al., 2017). In addition, people who spend more time using social media, on average, reported higher levels of depressed mood, loneliness, hopelessness, and feeling

inferior (Aalbers et al., 2019). However, the relationship between social media and mental health problems is likely more complex than a straightforward, causal relationship because so many factors impact both depression and social media use (Keles et al., 2020).

Nonetheless, social media likely provides opportunities for widespread social comparisons that were not possible in the past. For example, comparisons often happen automatically and effortlessly; that is, people may tend to compare their cars, friends, jobs, children, bodies, salaries, and so forth. When these individuals inevitably find themselves lacking in comparison to others in any area, they are likely to experience negative affect (Barton, 2021). As an empirical example, social media use, specifically image-based social media platforms (e.g., Instagram), has been linked to greater levels of self-objectification (Fardouly et al., 2017). Further, individuals may use social media to observe and monitor attractive peers. This function, combined with constantly being exposed to increasingly sexualized mass media, has been shown to stimulate self-objectification and self-surveillance over time (Vandenbosch & Eggermont, 2015). This self-objectification can lead to a misrepresentation of peer norms, which can lead to greater promiscuity among teenage social media users and even potentially impact their willingness to engage in casual sex (van Oosten et al., 2017). Furthermore, more frequent social media involvement has been shown to impact other facets, such as an increase in body consciousness and body shaming (Manago et al., 2015). In addition, findings suggest that there are specific behaviors that women engage in before using social media (e.g., editing photos) that can relate to negative consequences, such as depressive symptoms (Manago et al., 2015).

#### **The Present Study**

Raunch culture has changed the behavior of today's society, but researchers have yet to systematically study why this cultural shift has occurred, what may lead one to be more or less

accepting of raunch culture, and how this new concept impacts relevant psychosocial variables. With the internet and social media usage only expanding in recent years and raunch culture being more prevalent, there is a gap in the literature where raunch culture and objectification and social comparison frameworks are considered, and how raunch culture may be related to affective variables, such as depression. Thus, this study seeks to further examine and refine the relationships between raunch culture, social media involvement, and depressive symptomology within social comparison and objectification theoretical frameworks.

#### Social Media Use and Depression as Outcomes of Raunch Culture

Based on the theoretical perspectives and empirical findings discussed above, we highlight social media consumption and depressive symptoms as outcomes of endorsement of or participation in raunch culture. We identified these outcomes for further investigation based on the prevalence of social media consumption, as outlined above. For example, various social media platforms afford young women with the opportunity to engage in behaviors indicative of raunch culture (e.g., filming oneself "twerking" for "likes"). In addition, social media consumption is replete with opportunities for social comparisons. Self- or other-objectification can be more pronounced as a result of viewing other people engaging in raunch culture via social media platforms, and the constant stream of these behaviors can lead to further comparing oneself to others.

Depression is also a highly-relevant outcome, namely due to a) its importance as an outcome in objectification theory; and b) due to its biological sex differences. For example, the prevalence of major depressive disorder (i.e., clinical depression) is disproportionately higher in women than in men with a global annual prevalence of 5.5% and 3.2% respectively (Albert, 2015). In addition, depression is also more than twice as prevalent in young women (ages 14-25

years old) than it is in young men, albeit this prevalence ratio tends to decrease with age (Albert, 2015). Further, women often present with more internalizing symptoms (e.g., greater sensitivity to interpersonal relationships), whereas men present with more externalizing symptoms (e.g., greater sensitivity to external career and goal-oriented factors; Kendler & Gardner, 2014). In addition, prior research has shown that self-objectification is related to increased levels of depression, which indicates that biological factors alone (e.g., hormonal fluctuations) do not solely contribute to rates of depression in women (Muehlenkamp & Saris-Baglama, 2002).

#### **Research Questions and Hypotheses**

Raunch culture is a relatively newly-coined concept to describe behaviors associated with self- and other-objectification of women within a modern era. Given the attention this concept has received, further empirical investigations of its operationalization and outcomes are warranted. To our knowledge, there are no other studies documenting specific outcomes associated with raunch culture. As such, our aim of the current study is to systematically document the effects of endorsement of raunch culture. That is, is there evidence that endorsement of raunch culture is associated with greater depressive symptoms in women? Is raunch culture a relevant index of self- and/or other-objectification that can lead to depression? Given the nature and previous operationalizations of raunch culture, is this concept associated with social media consumption, which, in turn, can exacerbate depressive symptoms? Understanding the outcomes associated with raunch culture can further inform our understanding of the phenomenology of depression in women, providing support for the theoretical accounts described above.

Drawing from theoretical frameworks and prior empirical findings, the hypotheses<sup>1</sup> for this study are as follows:

- First, we hypothesized that depressive symptoms and one's acceptance of raunch culture would be positively correlated, such that persons endorsing greater depression severity will be more accepting of raunch culture.
- 2. Further, we hypothesized that this relationship would be moderated by biological sex, such that women will be more likely to evidence this effect. That is, we hypothesized that acceptance of raunch culture and depression will be significantly positively correlated for women only. We formulated this second hypothesis on the basis that facets of raunch culture tend to be more specific to women (e.g., releasing one's "inner pornstar").
- 3. Third, we hypothesized that raunch culture acceptance and depression would be mediated by social comparison, such that those who are more accepting of raunch culture will endorse higher levels of social comparison, which in turn, would lead to greater depressive symptoms.
- 4. Lastly, we hypothesized that the relationship between raunch culture and depression would further be mediated by social media use and social comparison, such that those who are more accepting of raunch culture will engage further in social media and therefore endorse higher levels of social comparison, thus experiencing greater depression symptoms.

<sup>&</sup>lt;sup>1</sup> These hypotheses in this paper have been slightly reworded compared to the hypotheses in our preregistration for clarity.

#### Method

#### Preregistration

This study has been preregistered at AsPredicted.com. The preregistration can be found at <u>https://aspredicted.org/blind.php?x=TZ6\_3YL</u>.<sup>2</sup>

#### **Open Practices**

Supplemental materials and data used in this study are available at

https://osf.io/d2pqm/?view\_only=d90bfe35876e48f593aef652b8d2386a.

#### **Participants**

Participants (N = 199) were obtained from an online study conducted via SONA, an

online research program utilized by the psychology department at a moderately-sized

Midwestern university. See Table 1 for an overview of participant characteristics.

#### Procedure

Participants accessed the study via the SONA system and, after providing informed consent, completed a battery of questionnaires, including the measures described below. Lastly, participants completed a demographics survey (including identifying their biological sex)<sup>3</sup> and were debriefed and thanked for their participation in the study. This study was approved by the authors' university institutional review board.

<sup>&</sup>lt;sup>2</sup> As detailed in our preregistration, we stated we would conduct post-hoc power analyses in anticipation of null findings as they relate to our mediation models. Per a suggestion by an anonymous reviewer, we deviate from our preregistration and opt not to conduct post-hoc power analyses for the results presented in this paper. As others note (e.g., Lakens, 2022), post-hoc power analyses are based on *observed* effect sizes in data that have already been collected, adding minimal information beyond reported *p*-values. Similarly, guidelines for determining power for mediation models have yet to be established, as the researcher needs to account for multiple indirect pathways (Schoemann et al., 2017).

<sup>&</sup>lt;sup>3</sup> As we note further in our discussion, we recognize the limitation of relying on a biological sex binary. However, we focused on biological sex as the majority of literature surrounding objectification and raunch culture centers on cisgendered women.

#### Raunch Culture Inventory (RCI)

The RCI is a novel measure that assesses the respondent's endorsement of raunch culture. The items in this measure query behavior that are believed to fit the description of raunch culture (e.g., wearing a "sexy" Halloween costume). The original version of the RCI used in previous research demonstrated acceptable internal consistency ( $\alpha = 0.73$ ; Hackathorn & Sinclair, 2021). The previously 26-item scale has been altered into a 21-item scale for the purposes of this study, as most items were revised to be gender-neutral (if applicable) and additional items were added to adhere to social media trends. See the supplemental materials online for the full RCI measure. The items are ranked on a Likert-type scale that ranging from one to five with one being "extremely unacceptable" and five being "extremely acceptable." Higher scores on this scale indicate greater endorsement of raunch culture. In the current sample, the mean score on the RCI was 75.31 (SD = 19.03, range: 27-121) and the measure had excellent internal consistency ( $\alpha = .94$ ).

#### Quick Inventory of Depressive Symptomatology – Self Report (QIDS-SR)

The QIDS-SR (Rush et al., 2003) is a 16-item measure that assesses symptom domains of clinical depression: sad mood, concentration difficulties, self-criticism, loss of interest, energy and fatigue, sleep disturbances, weight gain or loss, psychomotor agitation or retardation, and suicidal ideation (Rush et al., 2003). However, this study used a modified version of this scale sans the original item twelve which inquires about suicidality, as the researchers of this study were not equipped to respond to participants who may have indicated they were experiencing clinically-significant distress. The measure's total score ranges from 0-27, with higher scores indicating more severe depressive symptoms. The QIDS-SR has demonstrated good internal

consistency in previous research ( $\alpha = 0.86$ ; Rush et al., 2003). In the current sample, the mean for the QIDS-SR was 5.82 (*SD* = 4.61, range: 0-21), demonstrating good internal consistency ( $\alpha = .85$ ).

#### Iowa-Netherlands Comparison Orientation Measure (INCOM)

The INCOM (Gibbons & Bunk, 1999) is an 11-item scale that measures individual differences in social comparison orientation, which refers to the tendency to compare oneself with others. The INCOM has demonstrated good internal consistency in previous research ( $\alpha = 0.83$ ; Gibbons & Bunk, 1999). Higher scores on the INCOM indicate a greater tendency to compare oneself to other people. In the current sample, the mean was 39.87 (*SD* = 5.62, range: 20-55), demonstrating acceptable internal consistency ( $\alpha = .75$ ).

#### Social Media Intensity Scale (SMIS)

The SMIS (Shensa et al., 2018) is a six-item measure adapted from the Facebook Intensity Scale (FIS) and assesses one's emotional connection to social media and its integration into one's daily life using a Likert-type scale ranging from one ("strongly disagree") to five ("strongly agree;" Shensa et al., 2018). The SMIS replaces the word "Facebook" with the words "social media" to encompass more general social media usage. Higher scores indicate social media is more embedded in one's life. The SMIS has demonstrated good internal consistency in past research ( $\alpha = 0.92$ ; Shensa et al., 2018). In the current sample, the mean was 19.46 (*SD* = 5.10, range: 6-30), demonstrating good internal consistency ( $\alpha = .84$ ).

#### Time Spent on Social Media

A one-item question was embedded within our battery of questionnaires inquiring how much time participants spent (in hours and minutes) on social media for personal, non-work related use. Participants were instructed to report the exact screen time from their cell phone's settings for this item.

#### **Data Analysis**

Prior to our primary data analyses, data were assessed for normality. The distribution of the RCI, QIDS-SR, INCOM, and SMIS were all within normal limits (skew  $< \pm 1$ , kurtosis  $< \pm 1$ ; Tabachnick & Fidell, 2013). Mahalanobis distance indicated there were no multivariate outliers in the dataset. See Table 2 for Pearson's *r* correlations between the variables used in this study.

We examined Hypothesis 2, 3, and 4 via the PROCESS macro (v. 4; Hayes, 2017) for SPSS (v. 27). Model 1 (the simple moderation model) was used to test Hypothesis 2. Model 4 (the simple mediation model) was used to test Hypotheses 3. Hypothesis 4 was tested using Model 6 (the serial mediation model) of PROCESS. PROCESS tests for mediation via bootstrapping to estimate direct and indirect (i.e., mediation) effects. In each mediation model, 10,000 bootstrap samples were generated and 95% bias-corrected bootstrap confidence intervals were used to determine the significance of the direct and indirect effects. An indirect effect of zero indicates that the mediating variable did not significantly account for the relationship between the predictor and outcome variable. Therefore, when a confidence interval does not include zero, the indirect effect is considered significant, and one can infer that mediation has occurred in this model (Hayes, 2017).

#### Results

#### Hypothesis 1

We hypothesized that depressive symptoms and one's acceptance of raunch culture would be positively correlated, such that persons endorsing greater depression severity would be more accepting of raunch culture. To test for Hypothesis 1, a correlational analysis was conducted, which indicated a significant, positive correlation between depressive symptoms and endorsement of raunch culture, r(197) = 0.47, p < .001, supporting Hypothesis 1.

#### Hypothesis 2

We further hypothesized that this relationship would be moderated by biological sex, such that women would be more likely to evidence this effect. More specifically, we hypothesized the relationship between acceptance of raunch culture and depression will be significantly, positively correlated for women only. A moderation analysis was conducted to examine this relationship and overall, the model accounted for 25.16% (F = 21.85) of the variance in depressive symptoms (p < .001). In this model, raunch culture evidenced a significant direct effect on depressive symptoms (b = .13, p < .001). However, biological sex did not significantly moderate the relationship between raunch culture and depressive symptoms (b = .08, p = .05), contrary to Hypothesis 2 (see Figure 1 for an overview of this model).

As an exploratory analysis due to this marginal moderation finding, we examined the correlation between raunch culture and depression in men and women separately. For men, there was a marginal, positive association between raunch culture and depression, r(34) = .32, p = .06. For women, however, there was a significant, positive association between raunch culture and depression, r(161) = .49, p < .001, which lends support to Hypothesis 2, and may partially explain the marginal finding from the moderation model.

#### Hypothesis 3

We hypothesized that raunch culture acceptance and depressive symptoms would be mediated by social comparison, such that those who are more accepting of raunch culture would endorse higher levels of social comparison, which in turn, would lead to greater depressive symptoms. Hypothesis 3 was tested via the simple mediation model (Model 4 in PROCESS) with INCOM as the mediator.

Overall, the model accounted for 26.05% (F = 28.18) of the variance in depressive symptoms (p < .001). Endorsement of raunch culture evidenced a significant direct effect on depressive symptoms, b = .12, p < .001. However, social comparison, as measured by the INCOM, did not evidence a significant indirect effect, b = .0060, 95% CI [-.0008, .0168]. As the 95% CI includes 0, it is assumed that mediation did not occur in this model (Hayes, 2017; see Figure 2 for an overview of this model).

#### **Hypothesis 4**

Lastly, we hypothesized that the relationship between raunch culture and depression would be mediated by social media use and social comparison, such that those who are more accepting of raunch culture would engage in social media more, therefore endorsing higher levels of social comparison and thus experience greater depression symptoms. This hypothesis was tested two separate times: 1) using time spent on social media as the first mediating variable, which measures how much time participants spend on social media for non-work related use; and 2) using the SMIS, which measures participant's emotional connection to social media and its integration into one's daily life (Shensa et al., 2018).

#### Serial Mediation with Time Spent on Social Media

Overall, the model accounted for 27.19% (F = 2.67) of the variance in depressive symptoms (p < .001). Endorsement of raunch culture again evidenced a significant direct effect on depressive symptoms (b = .12, p < .001). However, social media use, operationalized by the amount of time participants reported spending on social media (b = .003, p = .12), as well as social comparison (b = .12, p = .05), did not evidence a significant direct effect on depressive symptoms. Furthermore, there was a non-significant serial mediation effect, b = .0003, 95% CI [-.0004, .0016]. That is, the proposed pathway of a) one's endorsement of raunch culture leading to b) more daily social media use, then leading to c) engaging in more social comparison, resulting in d) greater depressive symptoms was unsupported by this model, contrary to our hypothesis (see Figure 3 for an overview of this model).

#### Serial Mediation with SMIS

Overall, the model accounted for 29.50% (F = 27.20) of the variance in depressive symptoms (p < .001). Endorsement of raunch culture evidenced a significant direct effect on depressive symptoms (b = .12, p < .001). Interestingly, social media intensity was inversely associated with depressive symptoms (b = .25, p < .001). Furthermore, social comparison was significantly associated with depressive symptoms (b = .16, p = .002). Lastly, there was a significant serial mediation effect, b = .005, 95% CI [.0011, .0098], suggesting that endorsement of raunch culture is associated with more intense use of social media, which, in turn, is associated with greater levels of social comparison, leading to higher levels of depressive symptoms. This serial mediation model thus provides support for Hypothesis 4 (see Figure 4 for an overview of this model).

#### Discussion

Raunch culture is a relatively novel and multifaceted phenomenon which has only recently been operationalized (Barton & Mabry, 2018; Sherman & Hackathorn, 2020). As such, it is important to identify the potential negative impacts of raunch culture and its related societal norms that are associated with the construct. The present study investigated the relationships between endorsement of raunch culture, social media consumption, how often one engages in social comparison, and depressive symptomatology. The current findings suggest that a) students

endorsing greater depressive symptoms also endorse raunch culture more, and that this effect may be more prominent in women; b) levels of social comparison also add explanatory value in predicting depressive symptoms; and c) raunch culture may be associated with an unfolding pathway, wherein endorsement of these features are associated with more intense consumption of social media, which in turn can lead to higher rates of social comparison and ultimately affect depressive symptoms.

Regarding the relationship between raunch culture and depressive symptoms more specifically, we sought to better understand possible factors impacting this association by examining whether biological sex moderated this relationship. We were interested in whether women were more likely to endorse raunch culture and concurrent depressive symptoms, given that raunch culture is centered around the hypersexuality of women, which ultimately impacts women more than men (Barton & Mabry, 2018; Levy, 2005). However, the primary moderation model suggested that the relationship was not significantly moderated by biological sex. Indeed, one explanation for these null findings could be due to the parameters of the statistical design and study; that is, over 81% of the sample identified as female, and as such, this analysis may not have been adequately powered to detect a moderating effect given the unbalanced male to female ratio. However, after following up on this interaction with an exploratory analysis, there was a significant, positive correlation between raunch culture endorsement and depressive symptoms in women. When considering the concept of "raunch culture," it is generally presumed that women are predominantly impacted by the hypersexualization of mainstream society (Barton & Mabry, 2018; Sherman & Hackathorn, 2020), and this finding provides some empirical insight into this association. Further research, however, is needed to more systematically investigate the

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perceptions and impact of raunch culture in men, given the exploratory nature of this correlational finding.

Indeed, there is an interesting line of research centered around men's feelings about objectified women in media, and how these levels of objectification impact men's mental health and self-esteem. For example, a seminal panel study conducted by Aubrey (2006) showed that over time, exposure to sexually-objectifying television was associated with increased *selfobjectification* in both men and women. In addition, exposure to these sexually-objectifying messages from television were associated with increased body surveillance (i.e., continuously monitoring one's appearance) for men only (Aubrey, 2006). Further, it is unlikely that men are protected from sexual objectification of male bodies in the media (Aubrey, 2007), given the historical increasing presence of muscularity in the portrayal of men (e.g., Anderson & DiDomenico, 1992). As such, theoretical perspectives and empirical findings also provide an avenue for the exploration of raunch culture endorsement in men, and further research focused on examining these relationships in men is encouraged.

Contrary to Hypothesis 3, results indicated a non-significant mediational relationship. That is, how often one compares oneself to others alone does not appear to mediate the relationship of one's endorsement of raunch culture and the depressive symptomatology. Although there was a significant direct effect of both raunch culture and social comparison tendencies on depressive symptoms in this model, social comparison did not significantly mediate the relationship between raunch culture and depressive symptoms. Statistically, it is somewhat surprising to find significant direct effects for each pathway, but no significant indirect effect; however, this null mediation finding may stem from a lack of power or relatively small effect sizes. For example, determining an appropriate sample size for a mediation analysis is often difficult to undertake (Schoemann et al., 2017), as there are multiple parameters that formulate a mediation model. Furthermore, some of the relatively small effects (e.g., the relationship between raunch culture and social comparison, b = .05) may have attenuated the overall mediation effect. Conceptually, however, it could be that facets of social comparison measured by the INCOM are too broad in the context of the raunch culture and depression relationship. For example, whereas raunch culture is centered around sexual behaviors, the INCOM's items may not directly align with sexual behaviors or self-objectification (e.g., "I often compare myself with others with respect to what I have accomplished in life"). Future research may benefit from evaluating social comparison tendencies in relation to specific concepts associated with objectification theory, such as body surveillance and shame. For example, it is possible that endorsement of raunch culture can lead to comparison of one's own body with others, which could in turn exacerbate depressive symptoms.

Furthermore, there could be other variables that add more explanatory value to the raunch culture and depression relationship. As such, we expected that individuals endorsing more acceptance of raunch culture would consume social media more and as such, endorse higher levels of social comparison, thus experiencing greater depression symptoms. When testing this pathway using time spent on social media, we found no significant serial mediation effect. Indeed, a one-item variable as a mediator may be associated with greater measurement error, which in turn can explain these null findings. In addition, it is possible that the amount of time one spends on social media may not be capturing other relevant qualitative features of social consumption. For example, one could be "passively" using social media, simply scrolling

through one's Facebook or Twitter feed.<sup>4</sup> As such, we tested this pathway with a different mediating variable: the SMIS. The SMIS incorporates indicators of intensity or addiction such as "social media is part of my everyday activity," and feeling "out of touch" if one has not used social media recently. In this model, there was a significant overall serial mediation effect. Thus, when studying the impact of raunch culture in relation to social media, it may be more beneficial to look at the level of integration of social media into one's life rather than the amount of time they spend on social media per day. In addition, it may be more relevant to emphasize active social media behaviors and consumption and how they promote social comparison tendencies, given that social media is embedded within the majority of persons' daily lives (Auxier & Anderson, 2021).

In addition, these results should also be couched in the sample characteristics. That is, participants in our study were primarily White women from the midwestern United States. In line with objectification theory (Fredrickson & Roberts, 1997), women who adhere to Western society's expectations of beauty (i.e., women who are White, young, and slim) are the most likely targets of objectification (Anderson et al., 2018; Gervais et al., 2013). For example, research suggests that women who conform to the "ideal" body shape and size are most likely to attract an objectifying gaze (Holland & Haslam, 2013). Thus, the present sample included key demographic characteristics that align with the pathways proposed by objectification theory. Although aspects of objectification has also emphasized the role of other races and ethnicities. For example, Anderson's and colleagues' (2018) experimental findings show that Black women are

<sup>&</sup>lt;sup>4</sup> Interestingly, "passive" social media use may be associated with depressive symptoms (Valkenburg et al., 2021), and our correlations appear to support this notion as well (e.g., the QIDS and time spent on media are positively correlated, r = .28, p < .01).

just as susceptible as traditionally idealized White women to objectifying gazes and perceptions. Recognizing the racial and ethnic make-up of our sample (e.g., only 4.5% of our sample identified as Black), we encourage researchers to explore how raunch culture is endorsed or is manifested in other non-White cultures.

Relatedly, the geographic location of the study may also influence the present findings. Approximately half of our participants endorsed coming from a "small" hometown (fewer than 20,000 residents), compared to 8% of our participants endorsing coming from a large city (i.e., more than 100,000 residents).<sup>5</sup> As such, attitudes surrounding sex and raunch culture may be different in the midwestern United States than they are on either coast. In line with this notion, research suggests that rural communities espouse more conservative values and endorse greater gender role stereotyping (Lamont et al., 1996). As such, more conservative views about sexual behavior may be associated with diminished endorsement of raunch culture, and one may find larger effects between the associations investigated in this study in other geographic locations. Thus, future research may benefit from examining endorsement of raunch culture in varied geographic samples.

Lastly, we wish to emphasize the results as a whole and how they might contribute to an environment where women's sexuality is further controlled. As noted previously, raunch culture is often framed in terms of sex negativity (e.g., Levy, 2005) and is thought to be associated with negative outcomes for women (e.g., anti-empowerment; Barton & Mabry, 2018). However, we also propose that these issues can be carefully framed to have this work contribute toward women's empowerment instead of objectification or devaluation. For example, these results may

<sup>&</sup>lt;sup>5</sup> Further demographic information (e.g., religiosity, relationship status, and family income) are available in the full data set included on the Open Science Framework (OSF) page associated with this manuscript. These variables were omitted from Table 1 for brevity.

be considered within the framework of *sexual subjectivity*. Inherent in this term is the concept of being the subject, rather than the object, of sexual desire (Burch, 1998). Women's sexuality is often framed as passive and responsive to male sexuality (e.g., with men initiating sex and women serving as "gatekeepers;" Bond et al., 2020). As such, this framing can undermine women's understanding of themselves as *active* participants in sexual activity (Bond et al., 2020). Prior findings suggest that increased sexual subjectivity is associated with advocating for one's own wants and desires (Zimmer-Gembeck & French, 2016). In this sense, promoting women's sexual subjectivity may be associated with diminished negative outcomes associated with raunch culture. That is, increased sexual subjectivity may result in endorsement of raunch culture being viewed as empowering, in contrast endorsement of these behaviors as a means to "fit in" or compare oneself to others. Thus, future research may consider the role of sexual subjectivity as a means to counteract the purported negative effects of raunch culture and self-objectification.

#### **Strengths and Limitations**

This study is not without its limitations. First, this study relied on the use of single informant self-report questionnaires. Such measures are subject to bias when participants are asked questions of a personal nature as some participants may be influenced to respond to the survey in ways that would make them appear socially desirable, with or without their knowledge. Second, the sample in this study is not representative of the population as a whole, as the characteristics of the sample were rather specific (e.g., White female undergraduate students). As noted above, a larger, more diverse sample would help foster generalizability, and replication of these findings is strongly encouraged, as endorsement of raunch culture and its association with depressive symptoms may differ depending on gender, race, and/or geographic location.

Furthermore, an additional limitation is our reliance on a binary, birth-assigned sex variable in interpreting our findings. That is, we asked participants to identify their biological sex, which omits persons who identify as transgender from these analyses. However, we used a binary sex variable as the majority of objectification literature focuses on cisgendered women. Nonetheless, we recognize the influence of transgender or non-binary status on (self-)objectification, as a nascent line of research has documented similar unfolding pathways from self-objectification to affective concerns in transgender persons, such as body image issues and disordered eating (e.g., Brewster et al., 2019).

In addition, some of the null findings reported in the more complex statistical models (e.g., serial mediation models) may stem from this study being underpowered. Furthermore, a related limitation is this study's reliance on atemporal mediation models (Winer et al., 2016). That is, mediation models imply a causal pathway, and cross-sectional data is not able to infer causality. As such, future research may test these pathways further with longitudinal or timeseries data.

However, one strength of the current study was the use of the RCI, a novel measure that demonstrated excellent internal consistency. Thus, this measure may be helpful in future research studies exploring constructs related to one's endorsement of raunch culture. However, we recognize that use of an unvalidated measure is also a limitation of the study. To this end, we conducted an exploratory factor analysis (EFA) to help appraise the structural validity of the RCI. The full write-up and results of this EFA are available in our supplemental materials, suggesting that items from the RCI may conform to a one-factor solution. Nonetheless, future research will benefit from further examining the psychometric properties of the RCI (e.g., confirming its structural validity). It may also be useful in future research to adapt the RCI into a new measure where how often one participates in raunch culture behaviors or how willing one is to participate in such behaviors, as opposed to assessing how acceptable one views these behaviors. Another strength of this study was the objectiveness of the screen time variable, as the survey question described in detail how to locate and report participants' average daily screen time, as opposed to relying on participants to estimate how often they use their mobile devices. Although this variable was associated with null findings in our serial mediation model, future research will likely benefit from "objective" measures of social media consumption, and whether the individual is actively or passively engaging in social media.

#### Conclusions

In summary, this study examined the relationship between raunch culture, depression, social media use, and social comparison frameworks. Drawing from nascent literature surrounding the phenomenon of raunch culture, this study was able to further delineate key aspects that may relate to the negative effects of raunch culture. Specifically, one consistent finding emerged throughout these analyses: the significant, positive association between raunch culture and depressive symptomatology. It may be that there are other important variables aside from social comparison and/or social media use that add explanatory value to the mechanisms or moderating factors of the raunch culture and depression relationship. Future research may benefit from continuing to examine raunch culture in the context of other important psychosocial concepts (e.g., social norms and self-esteem).

#### **Disclosure Statement**

- (a) The authors declare that they have no financial conflict of interest.
- (b) The authors declare that they have no non-financial conflict of interest.

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## Table 1

Participant Characteristics (N = 199)

Birth-assigned sex (%)				
Female		81.9		
Male		18.1		
Ethnicity (%)				
White, non-Hispanic	83.4			
Black, non-Hispanic		4.5		
Hispanic or Latino		4.5		
Asian or Pacific Islander		4.0		
Native American		1.0		
Other		3.0		
Age	<i>M</i> = 19.66	<i>SD</i> = 4.12		

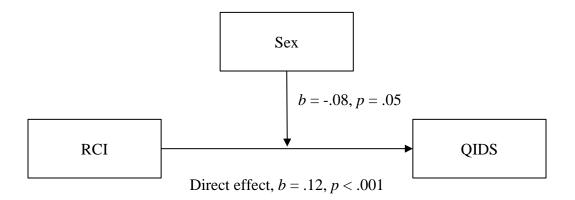
## Table 2

Variable	М	SD	1	2	3	4
1. QIDS	5.82	4.61				
2. RCI	75.31	19.03	.47** [.35, .57]			
3. INCOM	39.87	5.62	.22** [.08, .35]	.22** [.08, .35]		
4. SMIS	19.46	5.10	04 [18, .10]	.32** [.19, .44]	.33** [.21, .45]	
5. TSSM	231.88	158.28	.16* [.03, .30]	.13 [01, .26]	.13 [01, .26]	.26** [.12, .38]

Means, Standard Deviations, and Correlations with Confidence Intervals

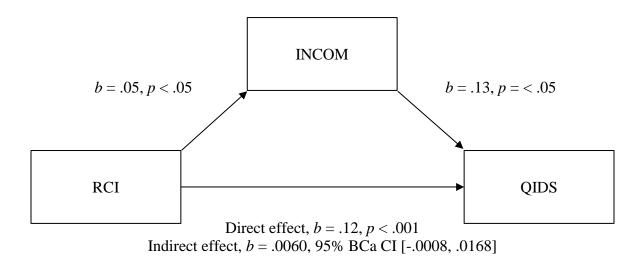
*Note. M* and *SD* are used to represent mean and standard deviation, respectively. Values in square brackets indicate the 95% confidence interval for each correlation. QIDS = Quick Inventory of Depressive Symptomatology, RCI = Raunch Culture Inventory, INCOM = Iowa-Netherlands Comparison Orientation Measure, SMIS = Social Media Intensity Scale, TSSM = Time Spent on Social media (i.e., measured in minutes, reported as daily averages across all social media platforms). \* p < .05. \*\* p < .01.

Hypothesis 2 Results using the Simple Moderation Model (Model 1 in PROCESS)



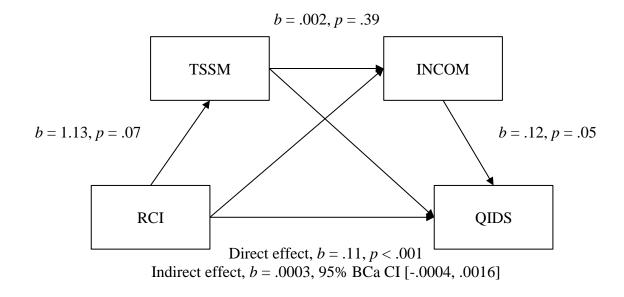
*Note*. RCI = Raunch Culture Inventory; QIDS = Quick Inventory of Depressive Symptomatology.

Hypothesis 3 Results using the Simple Mediation Model (Model 4 in PROCESS)



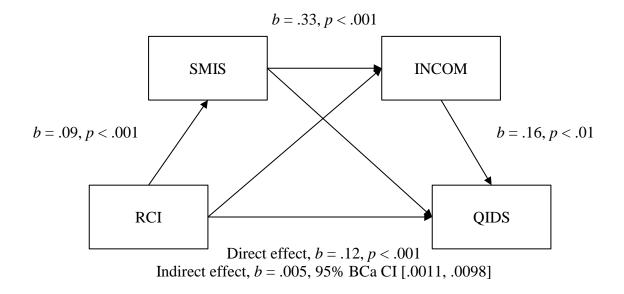
*Note.* RCI = Raunch Culture Inventory, INCOM = Iowa-Netherlands Comparison Orientation Measure, QIDS = Quick Inventory of Depressive Symptomatology.

Hypothesis 4 Results with Time Spent on Social Media as the First Mediator



*Note*. RCI = Raunch Culture Inventory, TSSM = Time Spent on Social Media (daily average, in minutes, of time spent on social media), INCOM = Iowa-Netherlands Comparison Orientation Measure, QIDS = Quick Inventory of Depressive Symptomatology. The indirect effect coefficient refers to the pathway of RCI  $\rightarrow$  SMTF  $\rightarrow$  INCOM  $\rightarrow$  QIDS.

Hypothesis 4 Results with SMIS as the First Mediator



*Note.* RCI = Raunch Culture Inventory, SMIS = Social Media Intensity Scale, INCOM = Iowa-Netherlands Comparison Orientation Measure, QIDS = Quick Inventory of Depressive Symptomatology. The indirect effect coefficient refers to the pathway of RCI  $\rightarrow$  SMIS  $\rightarrow$  INCOM  $\rightarrow$  QIDS.